This thesis addresses the issues surrounding the conservation of dalle de verre (also known as faceted or slab glass). A number of prominent buildings, as well as many less architecturally significant structures contain panels of this twentieth-century adaptation of stained glass. Dalle de verre is defined as ¾” to 1” thick slabs of glass (or “dalles”) set in a matrix of concrete or epoxy. It was widely discussed in stained glass literature of the 1950s and 60s, but little attention has been paid to this technique in more recent decades.

Although a number of buildings featuring dalle de verre panels have already required conservation or restoration, there are no standard recommended treatments, and work has always been conducted on a case-by-case basis. Conservation work has been performed by both stained glass conservators and architectural conservators, although they tend to approach the materials in different ways. This thesis investigates the reasons that dalle de verre fails, its modes of deterioration, and then focuses on solutions to these issues. In particular, previously applied or attempted conservation treatments are evaluated and new possibilities discussed. Issues of authenticity, architect intent, and aesthetic quality are investigated in applicable cases.

The first few chapters introduce the issues surrounding dalle de verre, the history of its use and production, and compare European and American examples and techniques. Changes and variations in production techniques, particularly the change from concrete to epoxy matrices, are analyzed. Subsequent chapters examine the assembly procedure, focusing on the relationship between the building’s structure, the dalle de verre panel, and the installation process. The final chapters catalogue deterioration issues and practiced conservation solutions, concluding with two case studies to demonstrate the need for a continuing investigation into new conservation methods. Overall this thesis argues that dalle de verre must be given the same considerations as traditional forms of stained glass, including regular inspections, maintenance, and periodic conservation.